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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,125	09/25/2006	Ursula Ruth Lenel	117-601	6314
23117 7590 12/30/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER GEBRIEL, SELAM T				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/594,125

**Applicant(s)**

LENEL ET AL.

**Examiner**

SELAM T. GEBRIEL

**Art Unit**

2622

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4, 8, 15, 16 and 23 - 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 8, 15, 16 and 23 - 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**8+DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 8, 15, 16, and 23 – 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Motta et al. (US 6,683,651 B1).

3. Regarding claim 1, Motta disclose a digital camera (Figure 1 – 7 Element 10) comprising:

An image sensor (Figure 2 – 6 image sensor 34) for capturing an image (Col 3 Line 29 – 20 );

A lens arrangement (Figure 1 – 7 Primary lens system 22 including Primary lens 24 and Focusing lens 25 and 26) arranged to focus light onto the image sensor (Figure 2 – 6 image sensor 34) and being movable (Focusing lens 25 and 26 are movable) to vary the focus (Col 3 Line 30 – 39).

A button (Figure 7 Two button image capture switch or pushbutton 84) operable by a user (Col 5 Line 65 – 67 to Col 6 Line 1);

A mechanical linkage coupling the button to the lens arrangement and adapted to move the lens arrangement on operation of the button (Col 7 Line 38 – 50, When the user depresses the capture object image switch 84 to the first stop position, the

microprocessor 36 under control of the auto focus algorithm 800 determines a proper focus setting for the primary lens system 22. More particularly, when the micro processor 36 receives an adjust focus signal from the image capture switch 84 being depressed to the first stop position, the microprocessor 36 moves the focus lens 26 from an initial hyperfocal position to a full range focusing position, Therefore there is a mechanical linkage between the button and the lens arrangement, See also Col 8 line 20 - 26);

A memory (Figure 1 – 7 storage device 38) for storing images captured by the image sensor (Col 36 – 43); and

A controller (Figure 1 – 7, Microprocessor 36 ) arranged to control the operation of the digital camera, the controller being arranged to perform an image capture operation in response to operation of the button (Col 6 Line 22 – 43), the image capture operation comprising:

Causing a series of images, each including of the entire image area and having differing focus provided by the lens arrangement, to be captured by the image sensor as the lens arrangement is moved on operation of the button and to be stored in the memory (Col 11, Lines 8 – 55 ; It should be understood that when the primary lens system is moving over its full focusing range a series of images with different focus characteristics are being captured); and

Analyzing the images stored in the memory to determine the quality of the focus of the images and on the basis of the analysis (Col 7 Lines 51 – 67 ; During the

sampling period  $T_2$ , the microprocessor under the control of the auto focus algorithm 800 determines which one of the captured and stored images is the best focused image),

4. Regarding claim 4, Motta further disclose a digital camera according to claim 1, wherein the linkage mechanism is arranged to moved the lens arrangement from its rest position by depression of the button (Col 7 Line 38 – 50 and See Col 11 Line 8 – 30) and further comprises:

A resilient element (Col 8 line 20 - 26) arranged to bias the lens arrangement back towards its rest position after depression of the button (Col 7 Line 38 – 50 and See Col 11 Line 8 – 30, When the return command 812 is invoked the primary lens is returned to its initial position therefore there is some kind of resilient element urging the primary lens 22 to its original position and See also Col 8 line 20 - 26); and

A damper (Col 8 line 20 - 26) arranged to control the speed of movement of the lens arrangement back towards its rest position (Col 7 Line 38 – 50 and See Col 11 Line 8 – 30, When the return command 812 is invoked the primary lens is returned to its initial position therefore there is some kind of damping means that control the speed of the movement since the primary lens 22 return to its original position and See also Col 8 line 20 - 26);

, The controller (Figure 7 Microprocessor 36) being arranged to perform said image capture operation with the series of images being captured as the lens arrangement is moved back towards its rest position (Hyper focal position) after depression of the button (Col 11 Line 11 – 30).

5. Regarding claim 8, Motta further disclose a digital camera according to claim 23, wherein the quality of the focus of the images is determined on the basis of an area of analysis which is a partial area of the entire image area (Col 7 Line 58 – 61, the determination of which captured and stored image signal is the focused in accomplished weighting the center more than heavily than the periphery).

6. Regarding claim 15, Motta further disclose a digital camera according to claim 1, wherein said step of analyzing the images stored in the memory to determine the quality of the focus of the images and, on the basis of the analysis, deriving as an in-focus image from the series of images is performed after all the series of images have been stored in the memory (Col 7 Line 51 – 67 to Col 8 Line 1).

7. Regarding claim 16, Motta further disclose a digital camera according to claim 1, wherein said step of said of analyzing (**best focused image is determined**) the images stored in the memory to determine the quality of the focus of the images (Col 7 Line 51 – 67 "During the sampling period  $T_2$  the microprocessor under the control of the auto focus algorithm 800 determines which one of the captured and stored images is the best focused image) and, on the basis of the analysis, deriving as an in-focus image from the series of images is performed as successive images of the series are captured by Initially storing the first image of the series as said in-focus image and in respect of each successive image in the series analyzing the image to determine the quality of the

focus of the image in comparison with the image stored as said in-focus image and on the basis of the analysis updating the image stored as said in-focus image (Col 7 Line 51 – 67 to Col 8 Line 1).

8. Regarding claim 23, Motta further disclose a digital camera according to claim 1, wherein said step of deriving an in-focus image comprises selecting one of the images of the series determined to have the best focus (Col 7 Line 51 – 67 to Col 8 Line 1, "During the sampling period  $T_2$ , the microprocessor under the control of the auto focus algorithm 800 determines which one of the captured and stored images is the best focused image").

9. Regarding claim 24, Motta further disclose a digital camera according to claim 1, wherein said step of deriving an in-focus image comprises synthesizing an image from the series of images (Col 7 Line 51 – 67 to Col 8 Line 1" The best focused image is determined by taking the derivative of a plurality of lines of pixels in each image and weighting the center more heavily than the periphery").

10. Regarding claim 25 Motta further disclose a digital camera according to claim 24, wherein the quality of the focus of the images is determined in each of a plurality of parts of the image and said step of deriving an in-focus image comprises synthesizing an image from the series of images by, in respect of each of said plurality of parts of the

image area, selecting the part of the image area determined to have the best focus from one of the series of images (Col 7 Line 51 – 67 to Col 8 Line 1).

11. Regarding claim 26, Motta further disclose a digital camera according to claim 23, wherein the quality of the focus of the images is determined in each of a plurality of parts of the image on the basis of an area of analysis which is a partial area of the part of the image area (Col 7 Line 51 – 67 to Col 8 Line 1" The best focused image is determined by taking the derivative of a plurality of lines of pixels in each image and weighting the center more heavily that the periphery").

12. Regarding claim 27, Motta further disclose a digital camera according to claim 23, wherein the quality of the focus of the images is determined in each of a plurality of parts of the image on the basis of an area of analysis which is the entire area of each part of the image area (Col 7 Line 51 – 67 to Col 8 Line 1, "The best focused image is determined by taking the derivative of a plurality of lines of pixels in each image and weighting the center more heavily that the periphery").

13. Regarding claim 28, Motta further disclose a digital camera according to claim 24, wherein the quality of the focus of the images is determined in each of a plurality of parts of the image on the basis of an area of analysis including the entire area of that part of the image area and an adjacent area (Col 7 Line 51 – 67 to Col 8 Line 1, "The



best focused image is determined by taking the derivative of a plurality of lines of pixels in each image and weighting the center more heavily than the periphery”).

14. Regarding claim 29, Motta further disclose a digital camera according to claim 28, wherein said parts of the image area each comprise a single pixel (Col 7 Line 51 – 67 to Col 8 Line 1, The best focused image is determined by taking the derivative of a plurality of lines of pixels in each image and weighting the center more heavily than the periphery).

15. Regarding claim 30, Motta further disclose a digital camera according to claim 1, wherein the digital camera has a display (Figure 7, Microdisplay 44) and the in-focus image is displayed on the display (Col 11, 65 – 67 to Col 12 Line 1 – 15, Recorded images are displayed each time the user actuates the image the image capture switch 84).

16. Regarding claim 31, Motta further disclose a digital camera according to claim 1, wherein the in-focus image is retained in said memory in a manner allowing the user subsequently to retrieve the in-focus image from memory (Col 11, 65 – 67 to Col 12 Line 1 – 15, Recorded images are displayed each time the user actuates the image the image capture switch 84).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SELAM T. GEBRIEL whose telephone number is (571)270-1652. The examiner can normally be reached on Monday-Thursday 7.30am-5.00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Sinh can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuan V Ho/  
Primary Examiner, Art Unit 2622

/Selam T Gebriel/  
Examiner, Art Unit 2622

Friday, December 19, 2008